EPA Announces a Public Health Emergency for the Libby Asbestos Site in Lincoln County, Montana

On June 17, 2009, Administrator Lisa Jackson determined that conditions at the Libby Asbestos site constitute a public health emergency. The public health emergency determination underscores the need for health care for Libby residents. EPA is working closely with the Department of Health and Human Services, which is making available a short-term grant to provide needed asbestos-related medical care to Libby and Troy residents.

In addition, while EPA's ongoing clean-up efforts have greatly reduced exposure, there still exists a continued significant threat to public health from actual and potential releases at the site. EPA will continue to move aggressively to clean up these communities and protect the health of the people.

Site History

The Libby Asbestos site in northwest Montana includes the towns of Libby and Troy and an inactive vermiculite mine seven miles northeast of Libby. Gold miners discovered vermiculite in Libby in 1881; in the 1920s the Zonolite Company formed and began mining the vermiculite. In 1963, W.R. Grace bought the Zonolite mining operations. The mine closed in 1990.

While operating, the Libby mine produced about 80% of the world's supply of vermiculite. Vermiculite has been used in building insulation and as a soil conditioner. Unfortunately, the vermiculite from the Libby mine was contaminated with a toxic form of naturally-occurring asbestos called tremolite-actinolite series asbestos.

EPA and Libby

In response to local concern and news articles about asbestos-contaminated vermiculite, the U. S. Environmental Protection Agency sent an Emergency Response Team to Libby in late November 1999. The Team immediately began collecting information.

EPA's first priority was to assess the current risk to public health from asbestos-contaminated vermiculite in Libby and then take necessary actions under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund) to reduce this risk.

In December 1999 EPA began collecting samples - nearly 700 - from air, soil, dust and insulation at homes and businesses. Indoor air sample results were released in January

2000, first to property owners and then to the media and general public. EPA also immediately identified areas in and near Libby that were likely to have high levels of contamination, including two former vermiculite processing facilities.

EPA also began assessing how those in the community with little or no association with the mine were exposed to and impacted by asbestos. EPA worked closely with local, state and federal agencies to understand how people might come into contact with asbestos-contaminated vermiculite and what could be done to prevent future exposures - in Libby and elsewhere.

Residents of Libby and Troy have been exposed to asbestos from various sources, including vermiculite processing wastes, asbestos in vermiculite insulation and asbestos-contaminated soil. Residents may be exposed through ingestion of contaminated soil, sediment, dust and water. However, the major source of health risk is from the inhalation route of exposure. There are many historical, current and potential future environmental inhalation exposure pathways in these communities.

Libby was added to EPA's Superfund National Priorities List in October 2002.

To date, approximately 3675 properties in Libby have been investigated. Approximately 825 properties in Libby still require inspections. Additionally, approximately 800 of the 1200 properties in Troy have been investigated.

As of 2009, the former vermiculite processing plants and other highly contaminated public areas have been cleaned up. Cleanups have also been completed at over 1100 residential and commercial properties. To date, nearly 600,000 cubic yards of contaminated soil and 42,500 cubic yards of contaminated debris have been removed from properties in Libby. EPA expects to complete cleanups of at least 100 properties during the 2009 construction season. In general, for residential cleanups EPA removes asbestos-containing vermiculite in outdoor soils and replaces it with uncontaminated soil. In some cases, asbestos-containing vermiculite located below excavated depths (cut lines) is capped in place. EPA also removes open, non-contained, or migrating vermiculite insulation in attics. Additionally, EPA addresses asbestos found in dust in indoor living spaces.

The total number of cleanups will depend upon the final cleanup standards to be set by EPA when the scientific studies supporting the Risk Assessment are completed and a Record of Decision is issued. (See Summary of Site Milestones.)

Revised Action Memo

On June 17, 2009, EPA completed a revised Action Memo authorizing the continued cleanup of residential properties in Libby and Troy.

Summary of Site Status

To better organize the study and cleanup of the site, EPA divided the site into seven areas, called operable units (OUs).

OUs 1, 2, & 6 - Processing Areas
The Remedial Investigations and Feasibility Studies (RI/FS) needed to support Proposed Plans and Records of Decision (ROD) are planned for OU 1 (the former Export Plant) and OU 2 (former Screening Plant) in 2010. Sampling along the rail line, OU 6, has been completed and the data are currently being analyzed.

OU4 - Libby Homes and Businesses
In 2002, EPA began extracting the uncontained vermiculite from inside homes and businesses. EPA's asbestos abatement contractors are using a vacuum truck to extract the uncontained vermiculite inside homes and backhoes to dig up contaminated yard soil (see photos above). Air sampling is conducted during and after the removal, to ensure that hazardous levels of asbestos are not present. Residents are relocated during the interior removals, which can take up to three weeks for each house. EPA has developed specific plans for conducting these removals. In general, EPA will remove vermiculite and restore the home, indoors and outdoors, to its pre-removal condition.

OU 3 -Mine Site

OU 3 encompasses the mine property and areas impacted by releases from the mine such as creeks, the Kootenai River, settling ponds, the surrounding forest, and Rainy Creek Road. The Remedial Investigations (RI) at the mine site began after the major exposure risks in the towns were eliminated. Currently EPA is evaluating the 2008 RI results, which include surface water, sediment and ambient air samples. The 2009 RI will likely include investigations of fish and small mammals, activity based sampling, and stream flow monitoring. These results will provide additional information to make decisions about potential cleanup actions for the mine.

OU 5 - Former Stimson Mill

EPA, in conjunction with Lincoln County and the Port Authority, has completed environmental sampling at the Stimson complex - the site of a former lumber mill.

Stimson donated the property to the Port Authority to facilitate economic redevelopment when the lumber mill operations ceased in 2002. Uncontained vermiculite insulation and contaminated concrete were removed from certain key structures. As part of its commitment to the reuse of Superfund sites, EPA signed a Cooperative Agreement with Lincoln County and the Port Authority to assist in land-use planning at the former mill site. The planning includes data collection, assessment of infrastructure and facilities, a fire inspection, and a market analysis/master plan. After sampling results for OU 5 are evaluated, the Remedial Investigation/Feasibility Study will be completed for a Record of Decision (ROD). EPA hopes that portions of OU 5 can be redeveloped and contribute to the economic vitality of the community as soon as possible.

OU 7 - The Town of Troy

The Montana Department of Environmental Quality is the lead agency for assessing properties in Troy under a cooperative agreement with EPA. The Troy Asbestos Property Evaluation (TAPE) began in 2007 and the sampling is scheduled to be completed in 2009. In 2009, Ambient Air Sampling will begin in Troy and certain highly contaminated properties will be cleaned up by EPA. Cleanup in Troy is progressing concurrently with OU4 work.

Below is a table that includes a brief description of each operable unit and estimated milestones in the cleanup process for each milestone.

Libby Asbestos Superfund Site
Estimated Milestones

Operable Unit Description	Estimated Milestones
OU1 - Former Export Plant *OU1 is limited to the property boundary of the former Export Plant*	1. Remedial Investigation 2009 2. Focused Feasibility Study 2009 3. Proposed Plan 2010 4. Record of Decision 2010 5. Remedial Design 2010 6. Remedial Action 2010
OU2 – Former Screening Plant/Flyway Property and KDC Bluffs *OU2 includes the former Screening Plant, the Flyway property, and the Highway 37 right –of-way adjacent to the these properties*	1. Remedial Investigation 2009 2. Focused Feasibility Study 2009 3. Proposed Plan 2010 4. Record of Decision 2010 5. Remedial Design 2010 6. Remedial Action 2010

Operable Unit Description	Estimated Milestones
OU3 – The Vermiculite Mine *OU3 includes the former vermiculite mine and the geographic area surrounding the former vermiculite mine that has been impacted by releases from the mine, including Rainy Creek and the Kootenai River.*	Potentially Responsible Party (PRP)-lead Remedial Investigation 2010 EPA-lead Human Health Risk Assessment 2010 EPA-lead Ecological Risk Assessment 2010 PRP-lead Feasibility Study 2011 Record of Decision 2012
OU4 –Libby *OU4 includes the residential, commercial/industrial and public properties located within the defined OU boundary. The former W. R. Grace operations are not included in this OU.*	1. Implementing Time Critical Removal Action 2. Reevaluating Cleanup Levels in Soils 3. Evaluating Operations and Maintenance Requirements.
OU5 – Stimson Lumber *OU5 is the area of land that included the former Stimson Lumber Mill.*	1. Remedial Investigation & Feasibility Study 2010 2. Qualitative Risk Assessment 2010 3. Proposed Plan 2011 5. Record of Decision 2011 6. Remedial Design 2011 7. Remedial Action 2012
OU6 – BNSF Railroad *OU6 includes the rail yard and railroad transportation corridors owned and operated by the Burlington Northern and Santa Fe (BNSF)Railroad*	1. Negotiating Remedial Investigation/Feasibility Study Order with BNSF Railroad 2009
OU7 – Troy *OU7 includes all residential, commercial, and public properties within the town of Troy. MDEQ has the lead on this OU.*	1. Implementing Time Critical Removal Action 2. Reevaluating Cleanup Levels in Soils 3. Evaluating Operations and Maintenance Requirements.

Additional Sampling and Site Characterization

EPA has been engaged in a comprehensive activity-based sampling effort in Libby since 2007. This sampling will assess the level of human exposure that might occur during particular outdoor activities such as gardening and yard maintenance and indoor activities such as vacuuming. The final report on the results is expected in fall 2009. Once the report has been completed and peer reviewed, it may be appropriate to revise the current action level that has been used by EPA at the site. A revised action memorandum will be prepared to document any lowering of the action level which, in turn, may lead to more properties needing cleanup.

Toxicity-Studies on Libby Amphibole Asbestos

In February 2007, EPA approved funding for the Libby Action Plan that contains a number of studies of analytical methods, epidemiology, and toxicology related to Libby Amphibole asbestos. The National Health and Environmental Effects Research Laboratory and Region 8 scientists developed plans for fourteen studies, and since then have recommended and funded four additional studies. The results of these studies will allow EPA to better understand the toxicity of Libby Amphibole asbestos, support the Risk Assessment and help the agency set a final site-specific cleanup level for the site.
Link to EPA/HQ Page on Superfund Process

Long-Term Management of Asbestos Insulation

To help Libby and Troy residents manage vermiculite insulation in their homes, in 2006 EPA began providing a full-time service entitled the Environmental Resource Specialist. The Specialist assists property owners, firemen and other affected response personnel who encounter uncontained asbestos-containing vermiculite insulation during demolition, renovation or other activities that might expose them to Libby Asbestos.

Working with the Community

EPA maintains an office on Libby's main street, and a full-time EPA employee lives in Libby to provide project construction oversight. EPA works closely with local, state and federal agencies, including:

- the Montana Department of Environmental Quality (DEQ)
- the Montana Department of Public Health and Human Services (DPHHS)
- the federal Agency for Toxic Substances and Disease Registry (ATSDR)
- the Cities of Libby and Troy
- the Lincoln County Commissioners and Department of Environmental Health